From: Kaleri, Cynthia

Sent: Thursday, March 29, 2018 08:30 PM

To: Vyas, Himanshu

CC: North, Alexis; Beeler, Cindy; Sorrell, Virginia; Mia, Marcia

Subject: RE: Manufacturer Tested Controls

Hi Himanshu,

Texas refers to their language in the Standard Permit as BACT ... Here is the specific language from their Standard Permit - note that they actually have a tiered approach to claim the DRE for combustors given the level of monitoring done and where the waste gas is injected (flame zone is the higher DRE) and sulfur content:

(9) Process reboilers, heaters, and furnaces that are also used for control of waste gas streams may claim 50 to 99% destruction efficiency for VOCs and H2S depending on the design and level of monitoring applied. The 90% destruction may be claimed where the waste gas is delivered to the flame zone or combustion fire box with basic monitoring as specified in paragraph (j). Any value greater than 90% and up to 99% destruction efficiency may be claimed where enhanced monitoring and/or testing are applied as specified in paragraph (j). If the waste gas is premixed with the primary fuel gas and used as the primary fuel in the device through the primary fuel burners, 99% destruction may be claimed with basic monitoring as specified in paragraph (j). In systems where the combustion device is designed to cycle on and off to maintain the designed heating parameters, and may not fully utilize the waste gas stream, records of run time and enhanced monitoring is required to claim any run time beyond 50%.

...

(11) Flares used for control of emissions from production, planned MSS, emergency, or upset events may claim design destruction efficiency of 98% for VOCs and H2S and 99% for VOCs containing no more than three carbon atoms that contain no elements other than carbon and hydrogen. All flares must be designed and operated in accordance with the following: (A) Meet specifications for minimum heating values of waste gas, maximum tip velocity, and pilot flame monitoring found in 40 CFR §60.18; (B) If necessary to ensure adequate combustion, sufficient gas shall be added to make the gases combustible; (C) An infrared monitor is considered equivalent to a thermocouple for flame monitoring purposes; (D) An automatic ignition system may be used in lieu of a continuous pilot; (E) Flares must be lit at all times when gas streams are present; (F) Fuel for all flares shall be sweet gas or liquid petroleum gas except where only field gas is available and it is not sweetened at the site; and (G) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed at total of 5 minutes during any two consecutive hours. Acid gas flares which must comply with opacity limits and records in accordance with 30 TAC §111.111(a)(4), Requirements for Specified Sources, regarding gas flares, are exempt from this visible emission limitation. (H) Flares may be designed with steam or air assist to help reduce visible emissions from the flare but must meet the appropriate requirements in 40 CFR 60.18. (I) At no time shall minimum heating values fall below the associated minimum heating value in 60.18.

Hope this helps!

Cynthia J. Kaleri

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Attention: Cynthia J. Kaleri (6EN-AA)

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From: Vyas, Himanshu

Sent: Thursday, March 29, 2018 3:10 PM

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Subject: RE: Manufacturer Tested Controls

Thanks for your feedback, Cindy. Ex. 5 Deliberative Process (DP)

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Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

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Subject: RE: Manufacturer Tested Controls

Ex. 5 Deliberative Process (DP)

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Subject: FW: Manufacturer Tested Controls

Sorry to bug you all on another question on applicability on the existing NSPS OOOOa even as we all are busy working on the proposed revision.

The gist of the question is: since the NSPS OOOOa requires manufacturer guarantee of 95% or greater DRE in order to avoid testing of enclosed combusters, is it implied that so long as a combuster meets 95% DRE the technology standard to be set by the state in the state permit should be 95% and not greater even though most such combusters apparently meet as high as 99%?

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Please advise.

Thanks,

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Sent: Thursday, March 29, 2018 1:01 PM

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Cc: Ramamurthy, Krishnan <kramamurth@pa.gov>; Bhatt, Naishadh <nabhatt@pa.gov>; Trivedi, Virendra <vtrivedi@pa.gov>

Subject: Manufacturer Tested Controls

Himanshu,

As part of our GP-5/GP-5A BAT determination for enclosed combustion devices, the Department established a 98% or greater control efficiency for certain emission sources based on vendor data. However, in conversation with operators in the industry, they stated that their preference is to use manufacturer tested models because it saves them significant money by removing the performance test requirement after startup and after every five years.

In 40 CFR §60.5413a(d)(11)(iii) it states "A manufacturer must demonstrate a destruction efficiency of at least 95 percent for THC, as propane. A control device that demonstrates a destruction efficiency of 95 percent for THC, as propane, will meet the control requirement for 95 percent destruction of VOC and methane (if applicable) required under this subpart." Some of the submitted test data (Big Iron Oilfield Services' BNECU-PI36 and BNECU-PI48 from the ttn website) and manufacturers' statements on destruction efficiency on the models I've checked so far show destruction efficiencies of 99% or greater.

My question is, does the certification process only certify a model to the 95% requirement from 40 CFR §60.5412a(a)(1) and §60.5412a(d)(1), or does it certify the model to the measured destruction efficiency?

d like to continue using the manufacturer tested controls, but unless the certification was to the actual reported destruction efficiency, they could not meet the Department's 98% requirement without having to do the required performance testing. As stated on one of the manufacturer's website, "US EPA Certified models … allow you to by-pass Quad Oa required emission testing of your units after 180 days of installation saving over $7,000 per test required plus the costs of filing results with the EPA."

Thank you,

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